

(19) World Intellectual Property
Organization
International Bureau



543074

(43) International Publication Date
19 August 2004 (19.08.2004)

PCT

(10) International Publication Number
WO 2004/069401 A2

(51) International Patent Classification⁷:

B01J 19/00

(81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

(21) International Application Number:

PCT/EP2004/001124

(22) International Filing Date: 6 February 2004 (06.02.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data:

103 04 855.3 6 February 2003 (06.02.2003) DE

(71) Applicant (for all designated States except US): HTE AKTIENGESELLSCHAFT THE HIGH THROUGHPUT EXPERIMENTATION COMPANY [DE/DE]; Kurpfalzring 104, 69123 Heidelberg (DE).

(72) Inventors; and

(75) Inventors/Applicants (for US only): ZECH, Torsten [DE/DE]; Obere Seegasse 42, 69124 Heidelberg (DE). SCHUNK, Stephan, Andreas [DE/DE]; Kaiserstrasse 59, 69115 Heidelberg (DE). HAAS, Alfred [DE/DE]; Richard-Wagner-Strasse 27, 69214 Eppelheim (DE).

(74) Agent: RICKER, Mathias; Jones Day, Prinzregentenstrasse 11, 80538 München (DE).

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

Published:

— without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.

WO 2004/069401 A2

(54) Title: DEVICE AND PROCESS FOR THE SIMULTANEOUS AGITATION OF REACTION MIXTURES

(57) Abstract: The present invention is in the field of the high-throughput research for liquid and multi-phase reactions. Thereby, the invention relates to a process for the simultaneous realization of at least one chemical reaction in at least two separate reaction vessels (10), wherein said process comprises at least the following steps: (i) providing at least one reaction mixture per reaction vessel (10); to (ii) pneumatic agitation of the reaction mixture in at least one reaction vessel by means of bringing the reaction mixture into contact with at least one fluid phase (18), wherein the at least one chemical reaction is carried out in at least one of the reaction vessels (10) in the batch mode and the reaction mixture contains at least one liquid phase (14). Thereby, the fluid phase (18) is supplied to the at least one reaction vessel (10) within a defined period and is at least partially discharged from the reaction vessel. The reaction mixture may further comprise another immiscible liquid phase (14') and/or solid phase (16). Furthermore, the present invention relates to the device, which pertains to the process.